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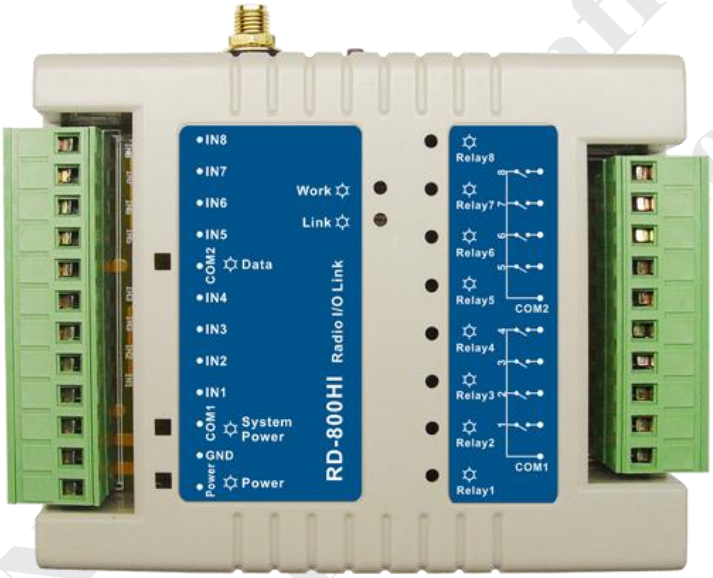
RD-800HI



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Important Event

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Declaration

Warranty

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Contact Us

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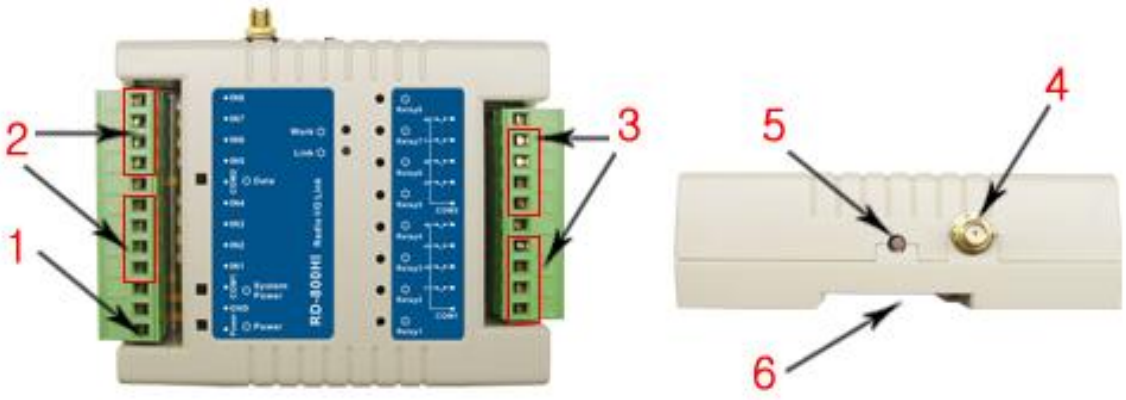
Product Instruction

over 40 It's only needed

Introduce

Every Part of Name and Function



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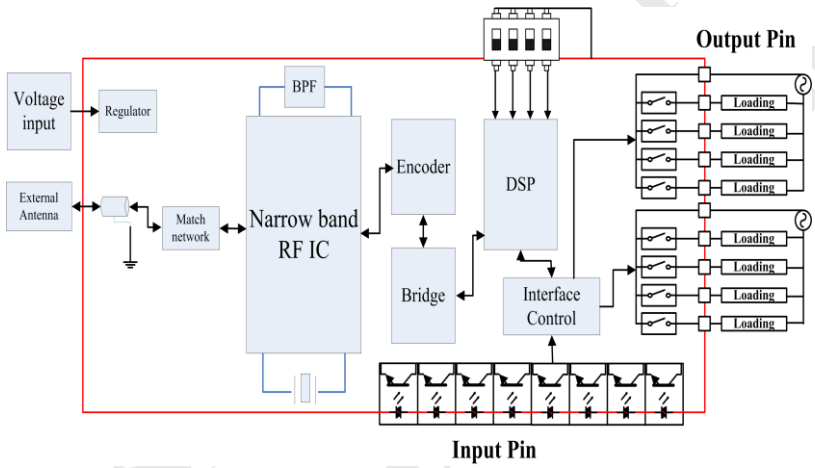
Position the picture	Name	Description

Product Block Diagram



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Introduction of Each Function

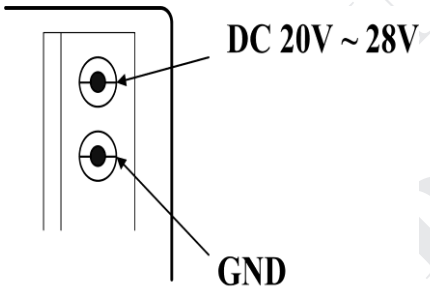
- **DSP Processor**

- **Circuit of radio frequency**

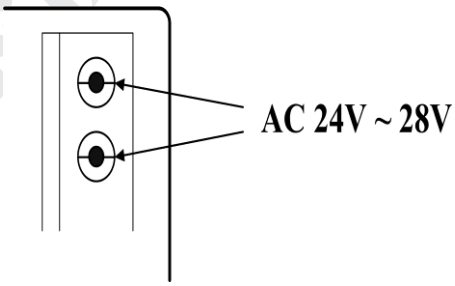
- **Memory**

- **Circuit of the power**

DC Linking Mode



AC Linking Mode



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Electronic Characteristic

Item	Specification	Remark
	: :	
	500mW	Collocate with Wireless RS232 Hi Power, it can adjust from 100mW to 2W.
Antenna	1/4λ wire antenna	Gain of 2.14 dBi or less
Antenna Power	Within 8 (+20% -50%)	Contact (50 Ω)
Modulation System	Binary FSK	Hopping
Oscillation System	PLL synthesizer system	
Radio Communication Speed	12.8Kbps	
Number of Channels	5	
Receiver Sensitivity	-118 dBm (1200bps)	Packet error rate 1% (253 bytes/1 packet)
Input I/O	VIL≦10V、12V≦VIH≦ 28V	Pulse wide＞200ms
Output I/O	AC 125V 5A、AC 250V 3A、DC 30V 3A	
Working Temperature	-10°C ~+70°C	
Storage Temperature	-30°C ~+95°C	
Consumption Current	MAX：300mA MIN：Disconnect：40mA Connect ：25mA	

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Interface Instruction

Power

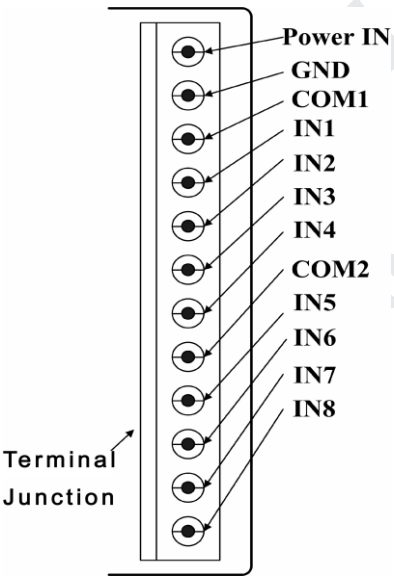
RD-800HI provides 2 methods of linking outer power which are AC 24V~28V or DC 20V~28V. In order to guarantee the module works normally, the direct current source should have the output ability of 500mA of peak value electric current.

Input Connection

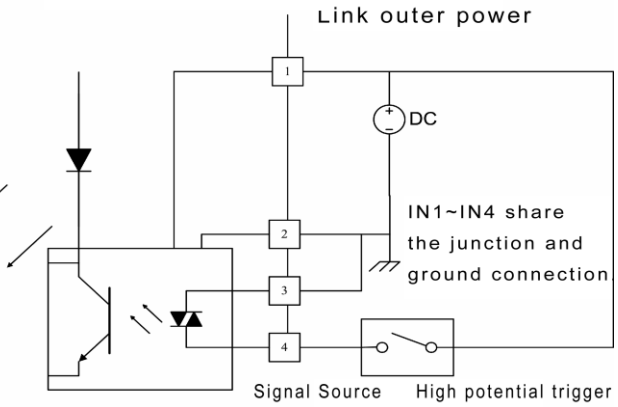
RD-800HI is able to offer 8 sets signal input port. IN1 ~IN4 shares COM1 and IN5 ~ IN8 shares COM2.

Two sets input ports are able to adopt different touch ways. One is the joint (COM) altogether receiving low electric potential, and touch the signal (IN) adopt the high electric potential. Another is the joint (COM) altogether touch off the signal (IN) adopt the high electric potential, one is the joint (COM) altogether receive the high electric potential, touch signal (IN) adopt the low electric potential. Trigger signal must be greater than the width of 200ms also can used according to different purpose.

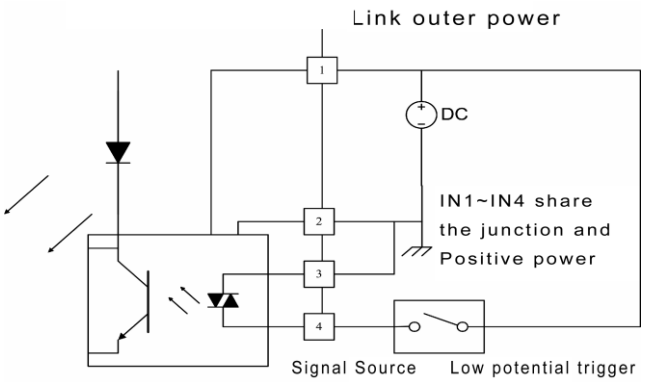
Input Port Diagram



Input Method 1



Input Method 2



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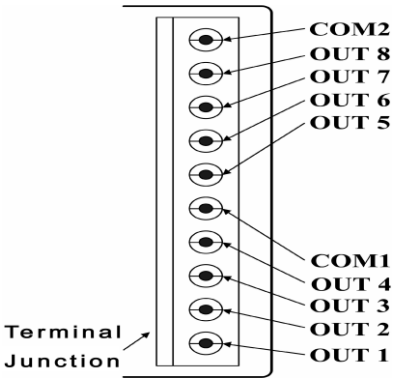
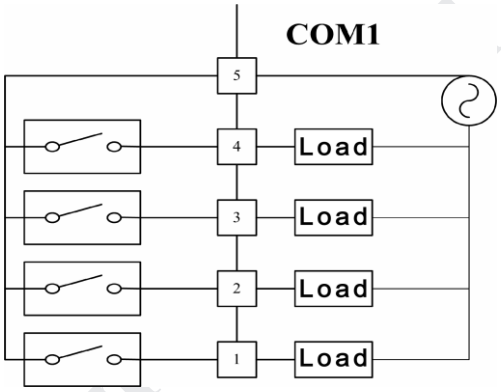
Output Connection

RD-800HI offered 8 sets signal output port, OUT1~OUT4 share with COM1 and OUT5 ~ OUT8 share with COM2, also provide high bearing press and the high electric current relay (AC 125V 5A, AC 250V 3A, DC 30V 3A) to be the output exchange switch. It makes RD-800HI can be applied in extensive purpose.

Output Port Diagram



Output Port Model



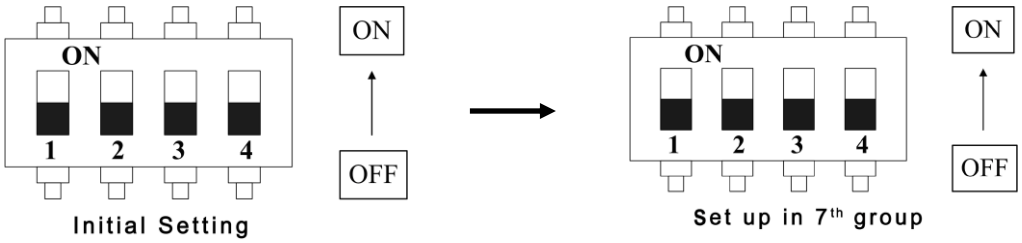
Equipment Connect Key

Please press the setting key under boot status until LED light flashes to entry set mode. You can adjust internal every parameter setting through our Wireless RS232 HI Power Transceiver. (Details setting way, please check for Wireless RS232 Hi Power data sheet.)

Setup the Group Switch

Built-in setup group switch in RD-800HI, provide users to adjust transmitting and receiving working group, established the assemble steps simply and settled more humanized. Please see the following illustration and form to know the setup way.

If you would like to set up in 6th group, to set up the switch of the back group No.2 and No.3 to ON, No.1 and No.4 don't have any change. When start the power, the RD-800HI will connect to setup group automatically. To set up the other group settings, please refer to the following table.



Switch 1	Switch 2	Switch 3	Switch 4	Working Speed
0	0	0	0	Test Mode
1	0	0	0	1st Group
0	1	0	0	2nd Group
1	1	0	0	3rd h Group
0	0	1	0	4th Group
1	0	1	0	5th Group
0	1	1	0	6th Group
1	1	1	0	7th Group
0	0	0	1	8th Group
1	0	0	1	9th Group
0	1	0	1	10th Group
1	1	0	1	11th Group
0	0	1	1	12th Group
1	0	1	1	13th Group
0	1	1	1	14th Group
1	1	1	1	Command Mode

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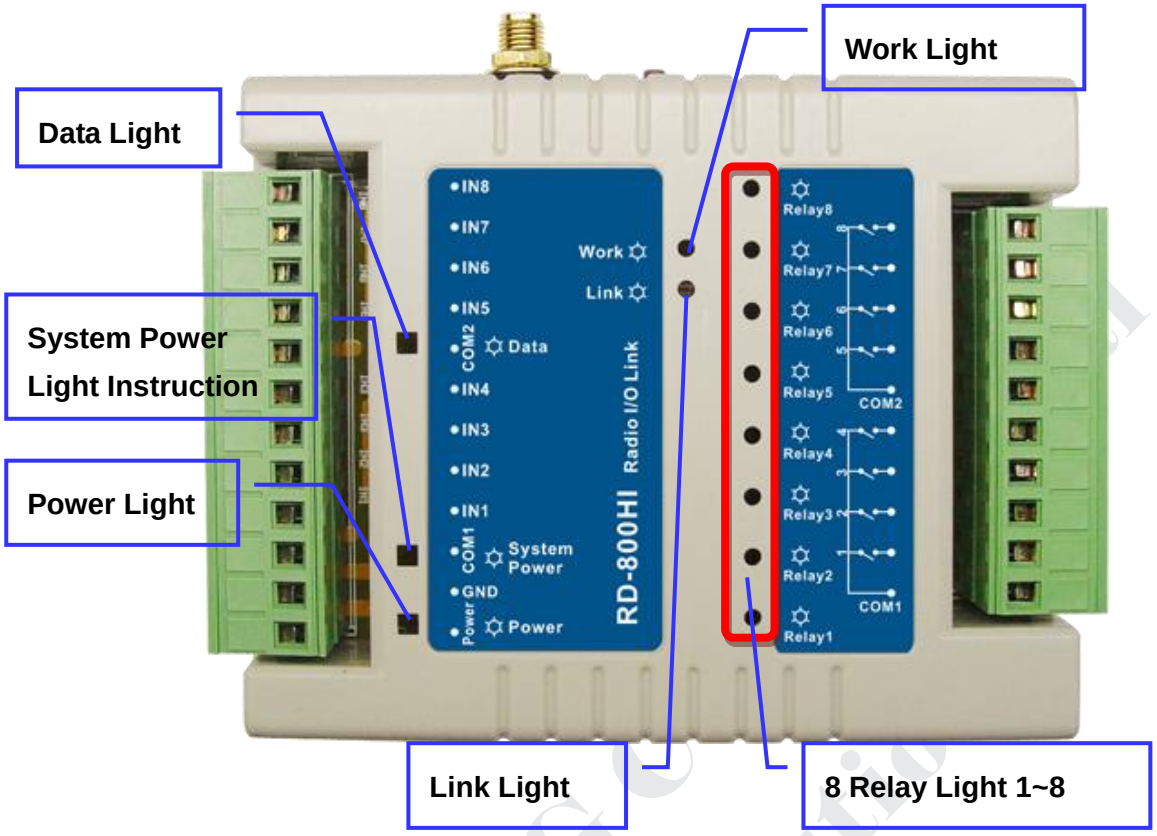
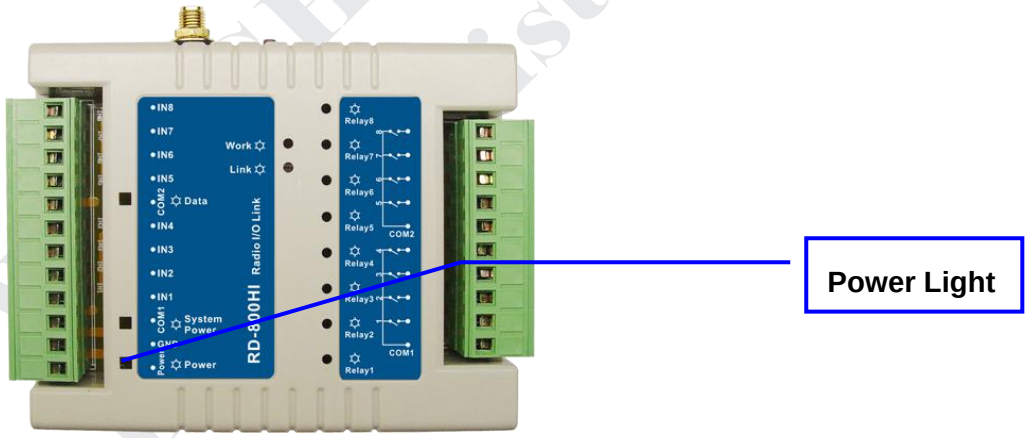
- When you adjust the switch to test mode, user will easily test where the problem is and decrease equipment setting time and cost. Also can test Output side is normal working or you can input signal through Input side, corresponding Relay side will action.

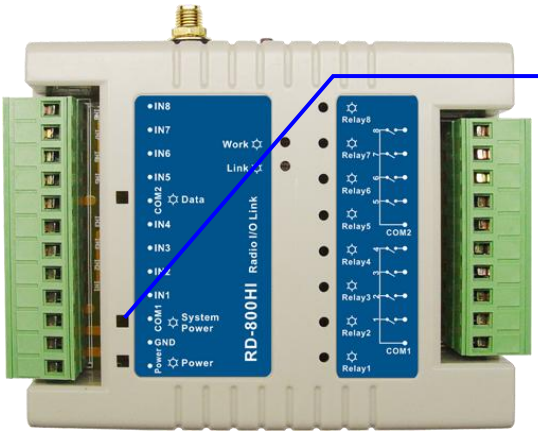
LED Indicator Light



- Power Light: When the light is bright, it means the device is opened and to electrify.

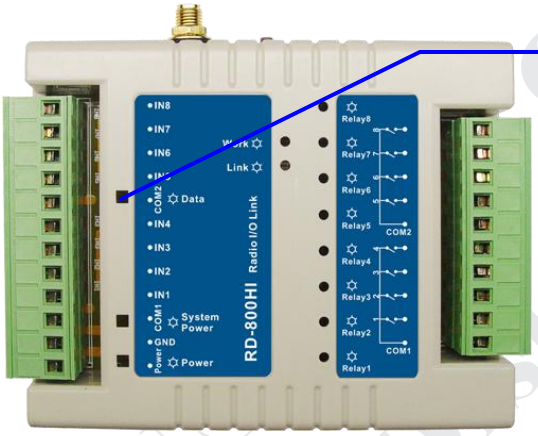


- System Power Light: When the indicator light keep being bright, it means the each working voltage is no problem.



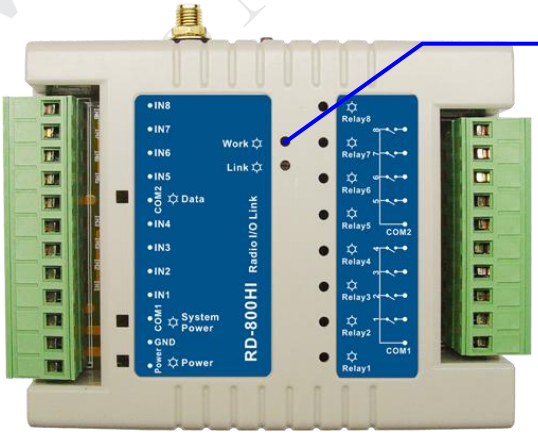
System Power keep bright is meaning all working voltage is no problem.

- Data Light: When receiving input data to RD-800HI, the Data indicator light will glimmer once.



RD-800HI received signal, Data Light will glimmer once.

- Work Light: When RD-800HI is in the normal working state, Work indicator light will keep being bright.



Under RD-800HI normal working status, Work Light keeps bright.

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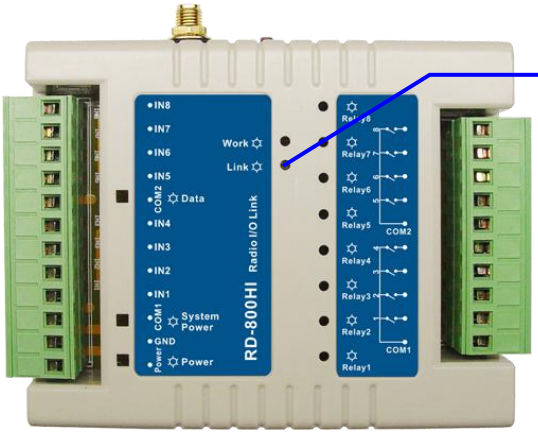
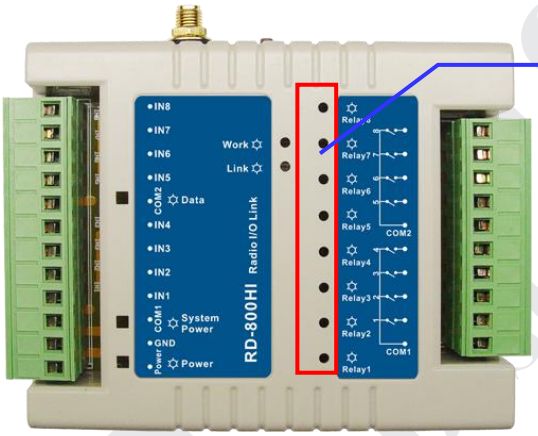
- Link Light: When RD-800HI link to the settle group in working range, the link indicator will keep being bright.



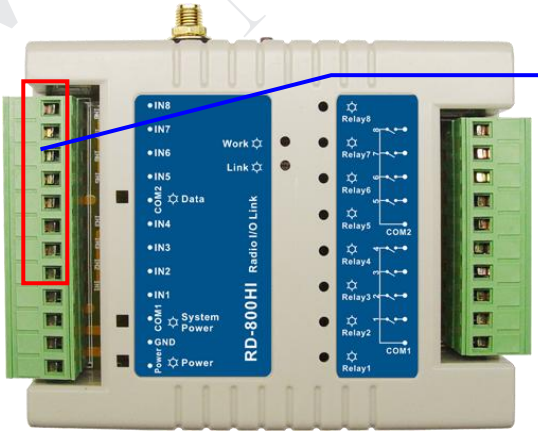
When RD-800HI link to the settle group in working range, the link indicator will keep being bright.

- Relay Light 1~8: When RD-800HI receives controlling signal to drive the relay movement, the corresponding relay indicator light will follow the relay movement to glimmer or keep being bright.



When RD-800HI receives controlling signal to drive the relay movement, the corresponding relay indicator light will follow the relay movement to glimmer or keep being bright.

- In1~In8 Light: When having data input to each input port, the corresponding indicator light will be glimmer once.



When having data input to each input port, corresponding indicator light will be glimmer once.

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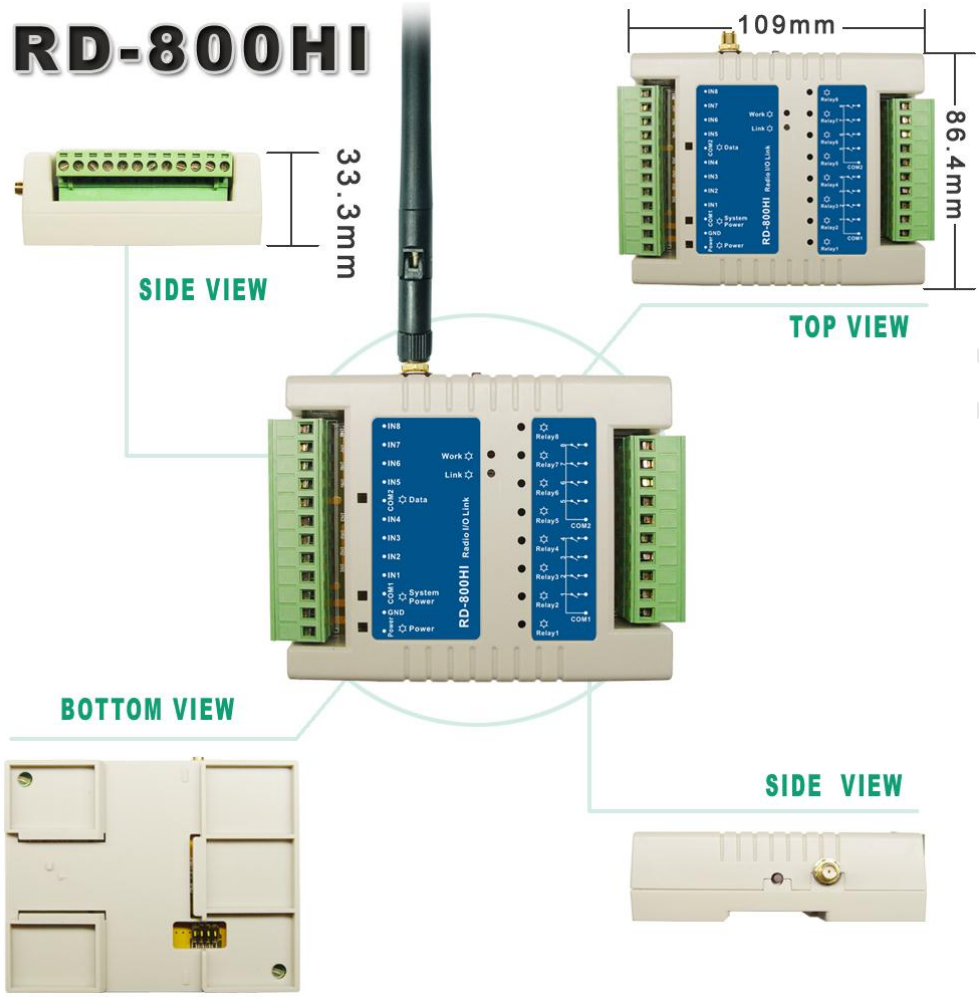
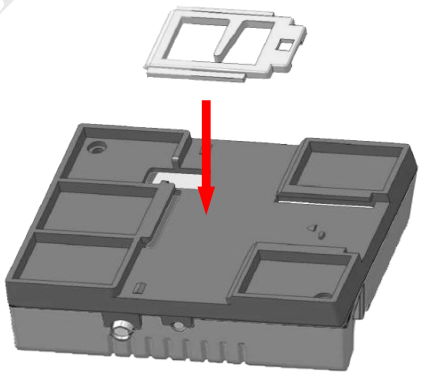
Product External



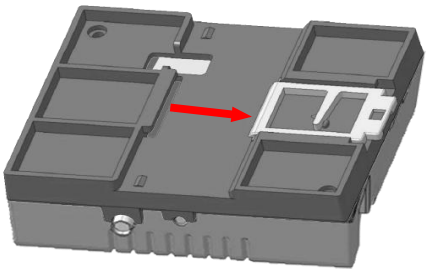
Assemble

Put into Aluminum Rail of Industry Control Box.

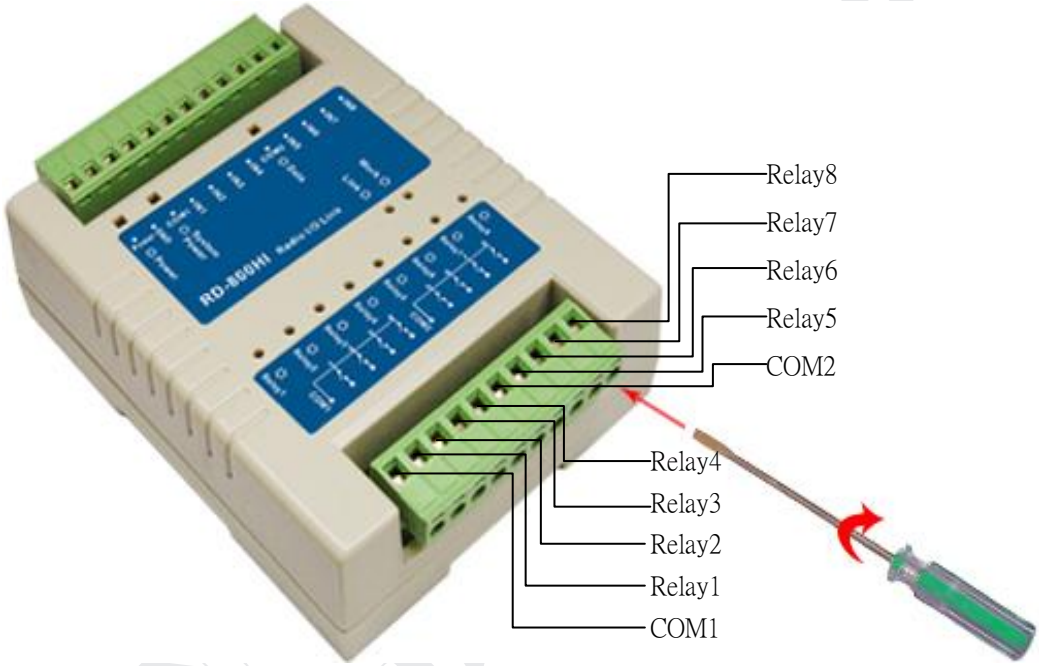
- Step 1



- Step 2

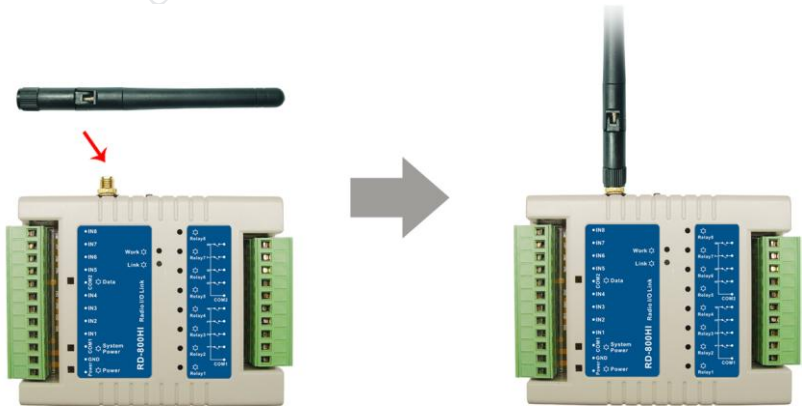


Line Connection

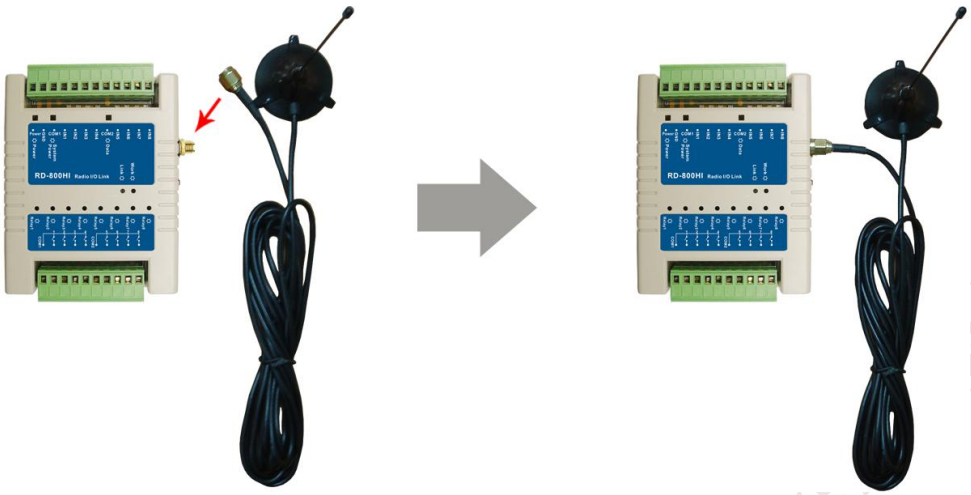


Install Antenna

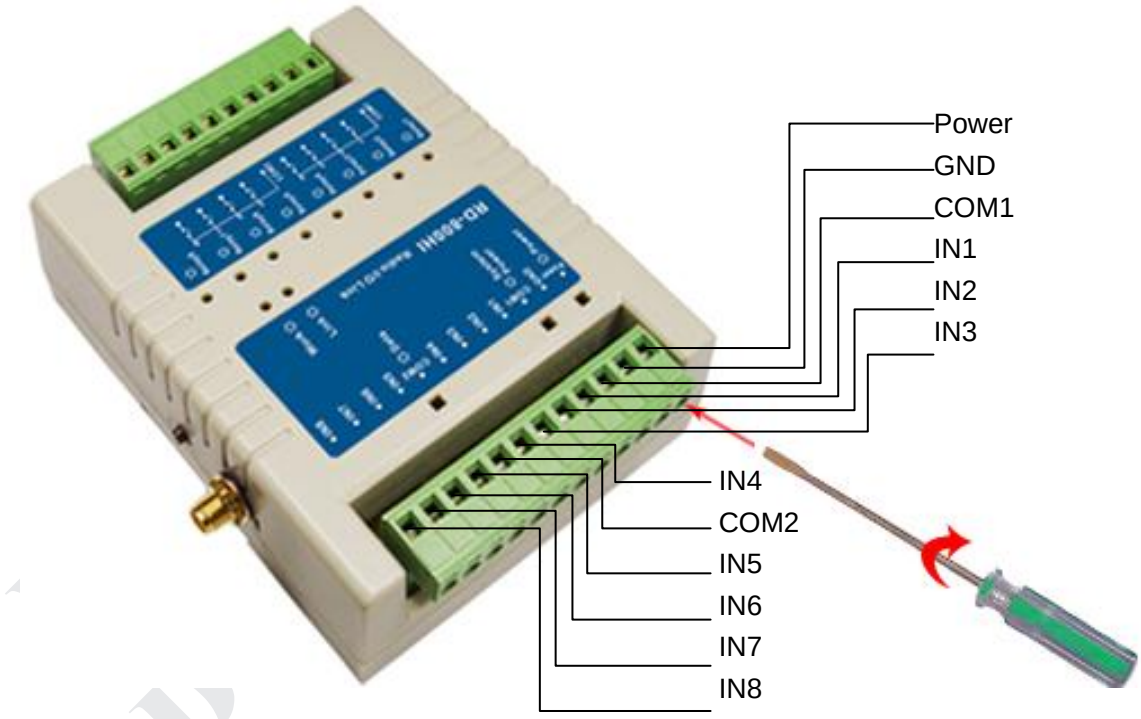
- Standard Antenna



- Sucker Antenna

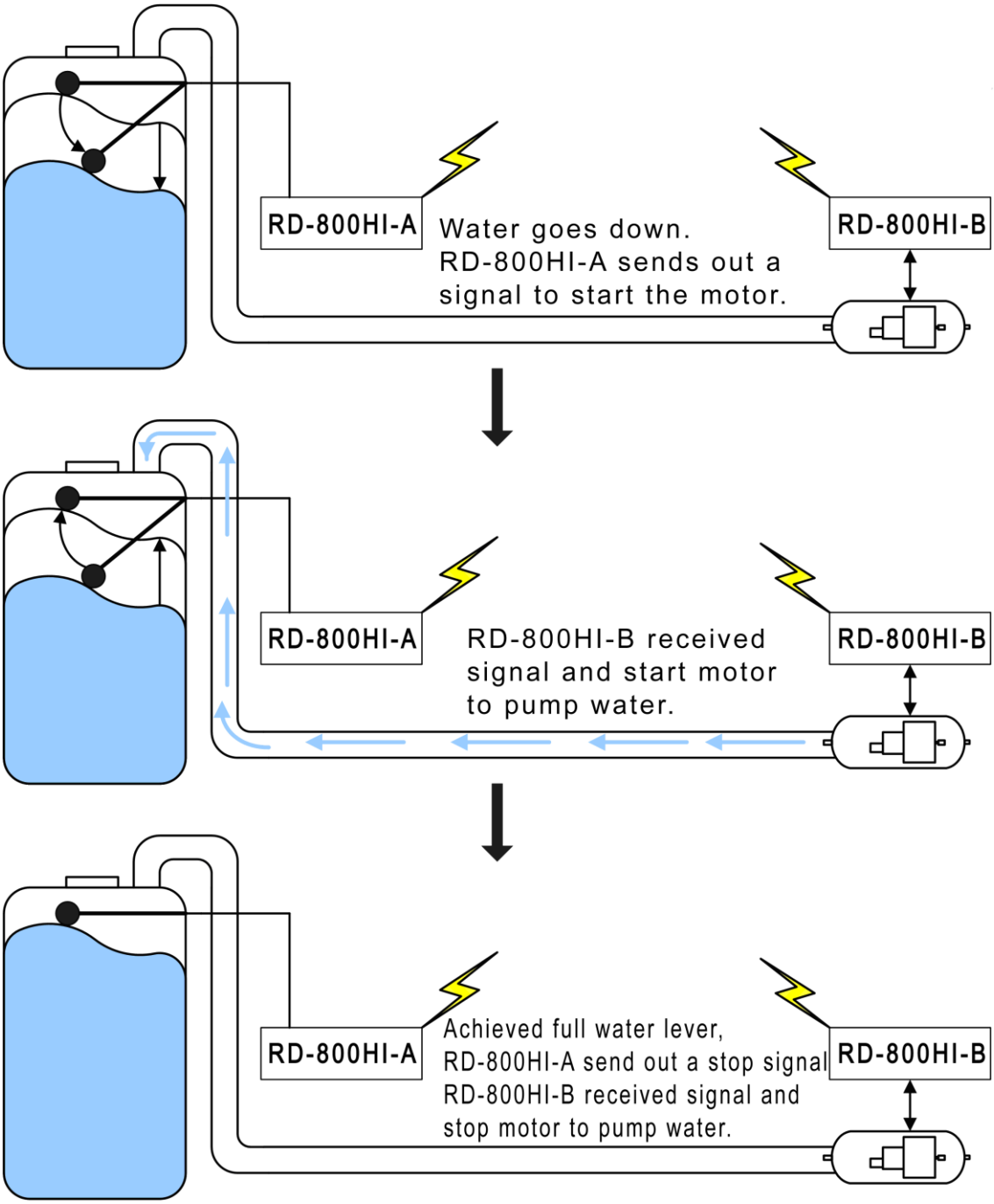


Connect Power



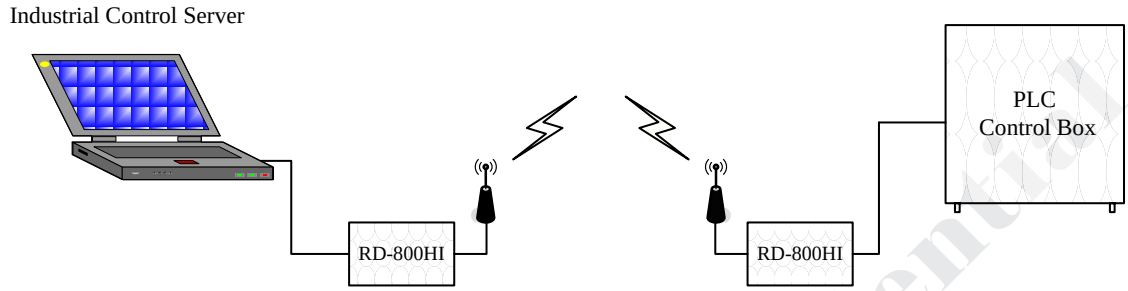
Application

- Example 1



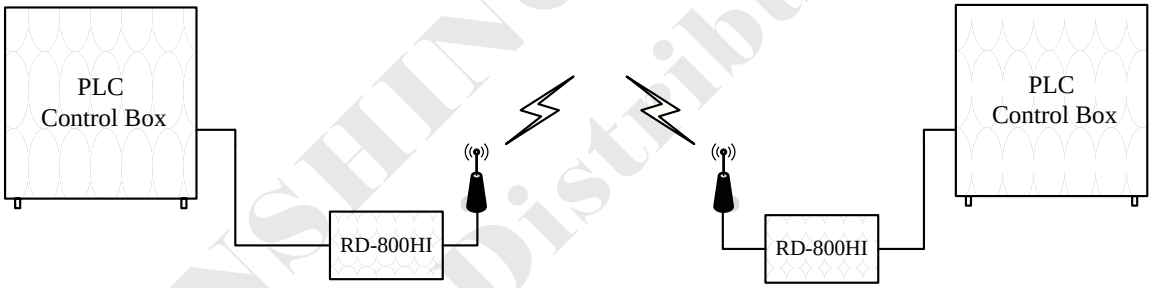
- Example 2

Example 2: Wireless industrial control transmission



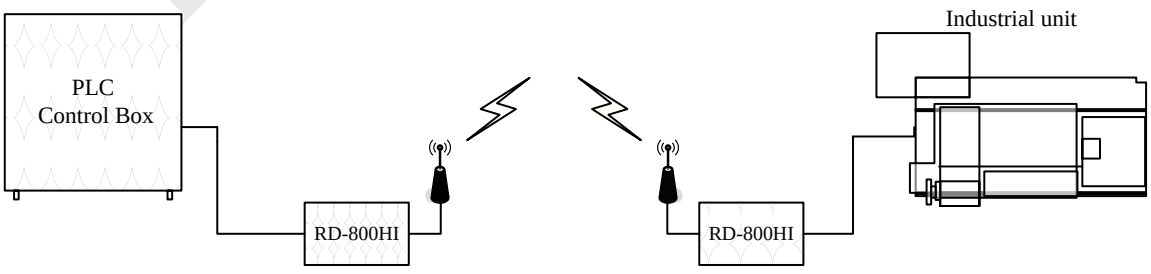
- Example 3

Example 3: Industrial unit transmission data per wireless connect in RD-800HI



- Example 4

Example 4: PLC Control Box wireless control Industrial unit



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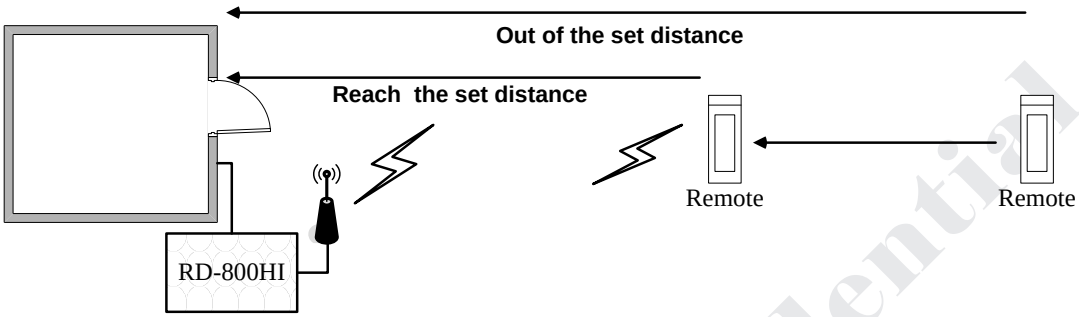
- Example 5

Example 5: Wireless Door Access Control system



Failure Rejection

The Device is Unable to Communicate

- Working LED does not work means having trouble in DSP processor and device power.
- If the working LED is bright, please confirm the settle group switch if setting up normally.
- Please confirm RD-800HI is during effective distance for receiving and transmitting.

Device Unable Normal Movement

- Confirmed the device power whether the correct specification is within the range of movement.
- Confirmed the input signal and voltage are normal or not.
- Working the built-in self-test function to measure RD-800HI if all function is normal.

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CE Caution Note (European Union)

Symbol of CE it accords with EMC regulation (89/336 / EEC) to represent this device, and the low-voltage regulation of European Union (73/23/EEC). It represents to follow the following standard regulations of European Union (The bracket is a reciprocal international standard reciprocal international standard and regulation).

- EN 60950/A11: 1997/(IEC 60950/A4: 1996),The ones that includes information science and technology of apparatus of e-commerce safe.
- EN 55024: 1998 (IEC 1000-4-2, 1000-4-3, 1000-4-4, 1000-4-5, 1000-4-6, 1000-4-8, 1000-4-11) -' scientific and technological apparatus of information - The characteristic of interfere avoided - Restrain and test method '
- Chapter 2 -Static release (ESD) Demand
- Chapter 3 -Radiate the static field demand
- Chapter 4 -The electron is transmitted / produced and washed (EFT) fast Demand.
- Chapter 5 -surge demand
- Chapter 6 -Resistance demand caused in field of wireless frequency.
- Chapter 8 -Magnetic field demand of electric frequency.
- Chapter 11 –Shortly cut off the demand of making a variation with the voltage transiently under the voltage.

EN 55022:1998/(CISPR 22:1997) ,Class B, ' “To assess information scientific and technological apparatus wireless restriction and way of interfering with the characteristic.”

FCC Consistent Declaration (U.S.A. Only)

Attention: FCC rule regulation, modified and changed must allowed by WENSHING Electronics company, otherwise that would make you operate this apparatus invalid. This apparatus adopted test, according to chapter 15 that FCC regulation, accord with Class B digital restrictions of device. These limits are designed to provide reasonable protection, avoid to having harmful interference at home’s environment.

This device may have radiated wireless frequency energy. If don’t allow the instruction manual, then may will interfere wireless communication. However, there is no any way to guarantee, it will not be interfered in particular installed. If this device really causes harmful interference, (It could be confirmed by turning on or off this device.) Advise you to try to use the following ways modifying the interference situation.

- Relocation receiving antenna or altering its direction.
- Increase the distance between device and receiver.
- Please connect this device to the outlet in the circuit different from the receiver.
- The following manuals is published by Federal Communications Commission, they must be helpful to all users.
- How to Identify and Resolve Radio-TV Interference Problems. (This manual can be obtained by relevant departments of publication of the U.S. government.)
- Government Printing Office, Washington D.C., 20402. Stock No. 004-00398-5

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